

WHAT IS CLAIMED IS:

1. A method of distributing multi-phase electric power in a train, said train comprising a plurality of cars, each of said cars comprising a wiring harness for interconnection to an adjacent car to distribute said multi-phase electric power, said method comprising:

generating said multiphase electric power;

providing said multiphase electric power to a power distribution network formed of a plurality of said wiring harnesses ;

tapping multiphase power from said power distribution network at at least one of said cars for consumption at said at least one of said cars;

sensing net current tapped at said at least one of said cars;

triggering an alarm if said net current tapped at said at least one of said cars does not equal zero, signifying a ground fault at said at least one car.

2. The method of claim 1, wherein said triggering comprises illuminating a light indicative of a ground fault.
3. The method of claim 1, wherein said generating comprises generating three-phase electrical power.
4. The method of claim 2, wherein said distribution system comprises two parallel set of multi-phase conductors, extending along a length of said train.

5. A train comprising:

a locomotive;

a plurality of cars;

a multi-phase electric generator;

an electrical distribution network extending from said electric generator to said plurality of cars;

at least one of said cars comprising power providing conductors forming part of said electrical distribution network, for providing multi-phase electric power to an electric load on said car;

a ground fault sensor interconnected with said power providing conductors for sensing and indicating a ground fault at said at least one of said cars.

6. The train of claim 5, wherein said ground fault sensor comprises a transformer to sense a net current delivered through said power providing conductors.
7. The train of claim 6, wherein said ground fault circuit further comprises an alarm indicator, for indicating an alarm in the event said net current does not equal zero.
8. The train of claim 7, wherein said alarm indicator comprises a light located in said at least one of said cars.
9. The train of claim 7, wherein said multi-phase generator comprises a three-phase generator.
10. The train of claim 9, wherein said distribution network comprises a plurality of interconnected wiring harnesses, extending between said cars.
11. The train of claim 9, wherein said distribution network comprises two sets of parallel wiring harnesses, extending between said cars, and said power providing conductors extend from one of said sets of parallel wiring harnesses.